

CLAIMS

What is claimed is:

1. A washing system using recycled cleaning liquid, comprising:
 - a washer fixture directed into a washing basin;
 - a trap vessel connected to the wash basin with a drain line;
 - a filter vessel connected to the trap vessel with a feed line;
 - a pump connected to the filter vessel with a draw line, and connected to a wash line; and
 - wherein the wash line is connected to the washer fixture.
2. The washing system according to claim 1 wherein the washing basin is a sink and the washer fixture is a faucet or a spray nozzle.
3. The washing system according to claim 1, further comprising:
 - a valve on the wash line;
 - a sensor arranged to generate a pump control signal responsive to the position of the valve;
 - pump control circuit coupled to the control signal; and
 - whereby when the valve is positioned to permit the cleaning liquid to flow from the washer fixture into the washing basin, the sensor generates the pump control signal to activate the pump.

4. The washing system according to claim 1, wherein the filter vessel is positioned sufficiently below the washing basin to enable the cleaning liquid to flow by the force of gravity from the washing basin into the filter vessel.
5. The washing system according to claim 1, wherein the filter vessel is positioned so that the pump moves the cleaning liquid from the trap vessel into the filter vessel.
6. The washing system according to claim 1, further comprising a bag filter in the filter vessel.
7. The washing system according to claim 1, further comprising a filter layer in the filter vessel.
8. The washing system according to claim 1, further comprising:
 - a float in the filter vessel;
 - an inlet supported by the float and coupled to the draw line;
 - wherein the float raises and lowers responsive to a level of the cleaning liquid to maintain the inlet in the cleaning liquid.

9. The washing system according to claim 1, further comprising a cart for holding the washer basin, the washer fixture, the trap vessel, the filter vessel, and the pump.

10. The washing system according to claim 9, further comprising:
wheels connected to the trap vessel or the filter vessel;
release mechanism for releasing the trap vessel or the filter vessel from the cart; and
whereby when released, the trap vessel or the filter vessel may be rolled away from the cart.

11. The washing system according to claim 1, further comprising a permanent housing for holding the washer basin, the washer fixture, the trap vessel, the filter vessel, and the pump.

12. The washing system according to claim 1, further comprising:
a filter vessel by-pass;
wherein the by-pass assembly enables the draw line to draw cleaning liquid directly from the trap vessel to the pump.

13. The washing system according to claim 12, wherein the by-pass assembly includes:

a feed line disconnect having a connector part;

a draw line disconnect having a mating connector part;

wherein the connector part and the mating connector part are couplable to bypass the filter vessel and to couple the feed line to the draw line.

14. A method of cleaning, comprising:

positioning a spray head near a part, the spray head directed to deliver a cleaning solution into a sink;

spraying, using the spray head, a stream of the cleaning liquid over the part, the cleaning liquid knocking away some chunks of the contaminant and dissolving some of the contaminant;

draining the cleaning liquid and chunks into a trap vessel, the trap vessel collecting larger of the chunks;

feeding the cleaning liquid from the trap vessel into a filter vessel;

filtering, in the filter vessel, smaller chunks and particulate contaminant from the cleaning liquid; and

pumping the filtered cleaning liquid to the spray head.

15. The method of cleaning according to claim 14, further including the following preparatory steps:

adding fresh cleaning solution to the trap vessel and the filter vessel;
and

disconnecting from the source of the fresh cleaning solution so that no fresh cleaning solution is introduced during the spraying, draining, feeding, filtering, and pumping steps.

16. The method of cleaning according to claim 14, further comprising:

bypassing the filter vessel;

removing a filter from the filter vessel and using the filter as the part to be cleaned; and

pumping cleaning fluid from the trap vessel to the spray head without having the cleaning fluid pass through the filter vessel;

17. A portable washing system using recycled cleaning liquid, comprising:

a spray nozzle connected to a wash pipe and directed into a sink;

a trap bucket connected to the sink with a drain pipe;

a filter bucket connected to the trap bucket with a feed pipe;

a pump connected to the filter bucket with a draw pipe, and connected to a wash pipe; and

a cart supporting the spray nozzle, sink, trap bucket, filter bucket, and pump.

18. The portable washing system according to claim 17, wherein the filter bucket further includes:

a filter in the filter bucket;

a float buoyed by a cleaning liquid that has passed through the filter;

an inlet on the float that is connected to the draw pipe; and

wherein the float raises and lowers responsive to a level of the cleaning liquid to maintain the inlet in the cleaning liquid.

19. The portable washing system according to claim 18, further including more than one filter in the filter bucket.

20. The washing system according to claim 17 further including:

a sensor;

pump control circuitry;

a signal line connecting the sensor to the pump control circuitry;

and

wherein the pump circuitry is arranged to active the pump when the sensor generates a control signal on the signal line.

21. A permanent washing system using recycled cleaning liquid, comprising:

a spray nozzle connected to a wash pipe and directed into a sink;
a trap bucket connected to the sink with a drain pipe;
a filter bucket connected to the trap bucket with a feed pipe;
a pump connected to the filter bucket with a draw pipe, and connected
to a wash pipe; and
a permanent housing supporting the spray nozzle, sink, trap bucket,
filter bucket, and pump.